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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,565	09/29/2003	Yoichi Kodama	1034232-000025	4272
21839 7590 06/04/2007 BUCHANAN, INGERSOLL & ROONEY PC POST OFFICE BOX 1404 ALEXANDRIA, VA 22313-1404			EXAMINER HAIDER, SAIRA BANO	
			ART UNIT 1711	PAPER NUMBER
			MAIL DATE 06/04/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/671,565

Applicant(s)

KODAMA ET AL.

Examiner

Saira Haider

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3, 4 and 7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 4 and 7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The rejections have been maintained and altered in view of the amended claims.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/16/2007 has been entered.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1, 3, 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaya et al. in view of Matsuura et al. (US 5,508,357).
5. Yamaya discloses thermosetting resin compositions comprising a polyimide and a bismaleimide, wherein the resins exhibit excellent heat resistance properties. Specifically, Yamaya discloses the claimed bismaleimide with the meta-position substitution (Formula (III)) and the claimed polyimide (Formula (I) (col.2, lines 44-69; col. 4, lines 60-61, Table 1 (Examples 9-17)).
6. Yamaya fails to disclose that the thermosetting resin composition is present in a laminate composite comprising a metal foil layer and a polyimide layer, as claimed. However, Yamaya discloses that the thermosetting resin compositions are excellent in adhesion, formability, moldability, flexibility and heat resistance. Further, the resin compositions have numerous applications including as adhesives, laminates and molding materials in electrical and electronic equipment and apparatus (col. 6, lines 14-20). Attention is directed towards the Matsuura reference.

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7. Matsuura teaches similar polyimide/bismaleimide thermosetting compositions, where the materials are applied to metal foils and as adhesives between polyimide films and metal foils (col. 11 lines 51-62; col. 12 lines 34-63). The articles are formed to provide substrates for flexible printed circuit boards or TAB tapes. It is the examiner's position that it would have been prima facie obvious to use the polyimide/bismaleimide compositions of Yamaya's invention applied to metal foils or between polyimide films and metal foils to form substrates for flexible printed circuit boards or TAB tapes having Yamaya's improved toughness, flexibility, adhesion, and heat resistance properties. The position is supported by the fact that the resin of Yamaya is exemplified as capable of bonding to steel sheets (col. 7, line 31 to col. 8, line 2).

8. Regarding the limitations drawn to the polyimide, Yamaya teaches polyimides fitting the claimed formulas (1) and (4) (col. 1 line 54-col. 2 line 30; examples).

9. In reference to the claim 7, Matsuura exemplifies that the thickness of the metal foil is 35 μm (example 4). It would have been obvious to use the metal foil in the thickness specified by Matsuura in order to fully embody the invention taught by the combination of Yamaya and Matsuura.

Response to Arguments

10. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., improved solder heat resistance) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

11. Applicants have further argued that it would not have been obvious to substitute the meta bismaleimide compounds of Yamaya in the invention of Matsuura. This is not the basis of the rejection, as stated above, it is the examiner's position that given the disclosure of Yamaya regarding

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suitability in electrical equipment, and given the teachings of Matsuura regarding a particular type of adhesive requiring laminate for use in electrical equipment, it would have been obvious to utilize the resin of Yamaya in the laminate disclosed by Matsuura.

12. Applicants have argued that the stainless steel described in the examples of Yamaya is different from the foil of the herein invention. The examiner notes that this citation of Yamaya is provided in order to support the fact that the resin of Yamaya is capable of bonding to metal, thus there exists a reasonable expectation that utilization of the Yamaya resin in the laminate composite of Matsuura would be successful.

Declaration under 37 CFR § 1.132

13. The declaration under 37 CFR 1.132 filed 2/15/2007 is sufficient to overcome the rejection of claims 1-4 and 7 based upon Matsuura in view of Yamaya. However, the declaration is insufficient to overcome the rejection of claims 1, 3, 4 and 7 based upon Yamaya in view of Matsuura because the declaration fails to establish that it would not have been obvious to utilize the resin of Yamaya in the laminate composite taught by Matsuura.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saira Haider whose telephone number is (571) 272-3553. The examiner can normally be reached on Monday-Friday from 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Saira Haider
Examiner
Art Unit 1711



James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700